URBAN DISTRESS, EDUCATIONAL EQUITY, AND LOCAL GOVERNANCE: STATE LEVEL POLICY IMPLICATION OF PROPOSTITION 2½ IN MASSACHUSETTS

by

Edward P. Morgan

An Occasional Paper

Presented by the
John W. McCormack Institute of Public Affairs
University of Massachusetts at Boston

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REPORT SUMMARY

This report examines the impact of Proposition 2-1/2 on different types of communities and the implications of this impact for state aid and state-level policies. The effects of 2-1/2, especially first-year effects in public education, are evaluated from the perspective of four general policy objectives or values: equity, efficiency, accountability, and local autonomy. The primary concern of this report is for various considerations of equity and inequality.

The Message of 2-1/2: The report briefly reviews evidence that voters were expressing three primary concerns in voting for Proposition 2-1/2: the need for greater efficiency in state and local government spending, relief from inequities in the property tax burden, and a demand for greater public accountability.

Urban Distress: Analysis of various local characteristics in cities, suburbs, rural towns, and high property-wealth resorts reveals that Massachusetts cities are fiscally stressed in at least four ways: (1) They have substantially lower-than-average property wealth and are thus handicapped by Massachusetts' near-total reliance on local property taxes.

(2) They suffer from significant budgetary fiscal distress in the form of high service demands and cost factors, and a high proportion of fixed costs in the local budget.

(3) They suffer from higher-than-average citizen fiscal distress in the form of the local tax burden, lower-than-average income levels, and a high proportion of poverty families.

(4) They exhibit below-average demographic and economic vitality in the form of population decline, low in-migration of new families, an old housing stock, and higher-than-average unemployment.

Proposition 2-1/2 Impacts: The biggest "losers" in the first three years under Proposition 2-1/2 have been precisely these same, fiscally-stressed cities (and communities in the bottom property-wealth quintile). Cities have experienced the greatest losses in local revenue in each of the three years under 2-1/2, and the greatest net losses in the first two years after receiving new state aid. Cities and low property-wealth communities also

made the most substantial cutbacks in local school budgets--particularly in instructional expenditures. While declining enrollments were related to educational cutbacks, they were less significant in explaining cutback size than local property wealth or local tax rates. Cities and low-wealth communities were likely to reduce their teaching workforce at a substantially higher rate than would be explained by enrollment decline.

Equal Educational Opportunity: Equal educational opportunity suffered in the first year under 2-1/2 in two ways: (1) Instructional cutbacks were most substantial in communities with the largest poverty populations and in school districts which sent a smaller percentage of their high school graduates to four-year colleges and universities. These patterns existed within each community type studied. (2) Spending disparities in FY 1982 were at their worst level since before the reform of Chapter 70 (1978). 1982 cutbacks resulted in a reversal of two equalizing trends that had occurred in the years 1978-81: the tendency of cities, rural towns, and low-wealth communities to spend at below-median levels increased in 1982, and the overall statewide variation in spending levels increased slightly in 1982.

Educational Equity: Educational (pupil) equity suffered slightly because of 2-1/2 related cutbacks. The relationship between local property wealth and local income on the one hand and per pupil spending on the other became stronger in 1982. In both cases, equity measures indicated less equity in 1982 than in any year since before the Chapter 70 reform. Taxpayer equity, or the relationship between local tax rates and spending levels, improved slightly as a result of Proposition 2-1/2. The school finance system remains inequitable according to both standards, however.

State Ability to Achieve Equity: The inequitable impact of Proposition 2-1/2 raises questions about the state's ability to achieve equity in local spending, especially in light of state aid distributed after 2-1/2 as well as the history of Chapter 70 aid to education.

Chapter 70 and Equity: Analysis of the revised Chapter 70 formula and aid distribution reveals three significant findings: (1) New state aid distributed in the first year under the "Boverini-Collins" Act was significantly equalizing; most was channeled to cities and low-wealth communities, despite the save-harmless provision. (2) Cities and low-wealth communities were, however, likely to use new aid increments to reduce locally-generated revenue for education (i.e., reducing taxes) rather than increasing per pupil spending. On the other hand, suburbs and high-wealth communities were likely to increase spending with new aid increments. The result was an improvement in taxpayer equity, but no improvement in educational equity. (3) The long-range effect of the save-harmless clause has been to favor precisely those communities that were least "needy" according to the Chapter 70 formula--namely, higher income suburbs and high property wealth communities. This occurs largely because of declining pupil enrollments in conjunction with underfunding of Chapter 70.

Local Autonomy: It is clear that local autonomy in budgetary decision making as it is currently structured is (however valuable) an obstacle to state efforts to achieve equity. However, analysis of teacher contract conflicts and citizen access reveals two pertinent findings: (1) Contract mediation and/or fact-finding is likely to occur in fiscally pressured communities; there is no link between contract conflicts and either current-year or subsequent-year spending levels or increases. (2) While local governance systems vary in their degree of citizen access or representation, communities with town meetings were far less likely to make substantial cuts in instructional staff in 1982 than communities with city or town councils--regardless of the size, density, community "type", or level of fiscal pressure in a given community. As a result, it seems unlikely that either teacher organization activity or local accountability to citizen input are in and of themselves obstacles to achieving equity.

Conclusions: (1) In terms of equity, the report concludes that the burden of Proposition 2-1/2 and inequitably distributed state aid is ultimately being borne by needier pupils and their families. In essence, Massachusetts is moving away from, rather than towards, fulfillment of its policy responsibilities in education. (2) Inefficiency in government spending has increased at the state level because of the "something-for-everyone" principle underlying local aid (particularly because of the save-harmless provision in Chapter 70). It has also increased at the local level in urban areas because of excessive educational cutbacks in conjunction with increases in administrative budgets. (3) In addition to evidence gathered elsewhere that public involvement in local decision making has declined in the aftermath of Proposition 2-1/2, the report suggests that public accountability varies from community to community in a manner that intensifies the inequitable effects of local fiscal stress. Communities with a higher degree of citizen access in local government and with a proportionately higher school constituency are also communities that are relatively free from fiscal distress. The result is increased educational inequity.

State Policy Options: This report takes the view that (1) the state has a significant policy responsibility for equality of educational opportunity and equity, and (2) state policy makers should seek to optimize the values of equity, efficiency, accountability, and local choice in their efforts to achieve educational equity.

The correspondence between inequities in local accountability and inequities in local fiscal stress virtually guarantees that Massachusetts cannot achieve educational equity or ensure equal opportunity simply by increasing state aid, no matter how equitably it is distributed. This is especially the case since school committee fiscal autonomy has been

repealed, although it is not clear that fiscal autonomy successfully "protected" school committees from municipal fiscal and polical pressures. As a result it would seem that the effort to achieve equity in an efficient manner, without violating local accountability, would include three elements:

(1) The re-separation of educational and municipal budgets and their link to state funds, together with increases in local citizen access in both school and municipal governing bodies.

(2) A substantial increase in the state share of financial responsibility for public education in conjunction with a substantially more equitable distribution of state funds (including a phase-down of save-harmless guarantees).

(3) Constitutional changes that allow wide latitude in local tax sources for municipal spending. Local tax options should maximize the opportunities for equity; where inequity in revenue-raising ability or local service-demand still exists, a reduced component of state aid is required.

URBAN DISTRESS, EDUCATIONAL EQUITY, AND LOCAL GOVERNANCE: STATE-LEVEL POLICY IMPLICATIONS OF PROPOSITION 2 1/2 IN MASSACHUSETTS

Overview

This report analyzes the impact of Proposition 2 1/2 on the 351 cities and towns of Massachusetts using the most current data available from a number of state agencies and other sources. The report complements the findings of previously published studies, including those of the Impact 2 1/2 consortium at M.I.T., the Massachusetts Departments of Education and Revenue, the Massachusetts Association of School Committees and Massachusetts Municipal Association, and individual researchers.[1] The analysis that follows focuses primarily on questions pertinent to policymaking at the state level.

The study describes and evaluates the impact of 2 1/2 by focusing on two primary questions:

(1) Who are the "winners" and "losers," to date, under 2 1/2? Which types of communities and populations have suffered the most substantial revenue losses and local budget cutbacks, particularly in education?

(2) Who are the winners and losers in terms of state aid generated in response to 2 1/2?

Descriptively, the report documents the effects of 2 1/2 in terms of revenue losses in the first three years, and local expenditures for educational and municipal budgets in FY1982. Furthermore, in the area of education, I will examine shifts in appropriations and expenditures for the instructional and administrative portions of local school budgets. These effects are analyzed in communities grouped according to population size, property wealth, per capita income, population density, and a number of other characteristics.

The most consistent pattern in terms of these effects reflected the distinct experiences of communities classified as cities, suburbs, rural towns, and resorts.

In addition to describing 2 1/2 effects, the report evaluates the statewide impact of 2 1/2 in terms of four guiding policy objectives or values: equity, efficiency, accountability, and local autonomy. I will discuss evidence below that the vote for Proposition 2 1/2 was in good part an expression of the first three of these values; the fourth, local autonomy, has long been a cherished tradition in Massachusetts and the other New England states.

The chief concern in evaluating the distribution of Proposition 2 1/2 effects is with equity, for two reasons. First, it is important to know if the burden of revenue losses and cutbacks is fair. That is, are expenditure reductions greatest in communities that are simply spending extravagantly or in school districts with sharp declines in pupil enrollment, or does the burden of 2 1/2 fall disproportionately on communities that are less able to raise local revenue or have higher service demands or costs? Prior to analyzing 2 1/2 effects, I will review variations in these local characteristics.

Second the principle of equity is of special significance in the area of public education, as is the state's concern for this policy objective. The goal of equal educational opportunity has been interpreted by the U. S. Supreme Court to be chiefly a state responsibility. Because the Webby v. King case before the State Supreme Judicial Court is based on the charge that Massachusetts is deficient in meeting this responsibility (as defined by the state consitution), this objective is of critical importance at the state level. In a later portion of this report, I will evaluate the impact of Proposition 2 1/2 on educational equity using per pupil spending figures for the fiscal years 1978-1982 and a variety of statistical tests.

As a result of the concern for equity and the state's role, much of the analysis that follows focuses on the impact of 2 1/2 on public education. This does not imply that other areas of local budgets have not suffered substantially in the wake of 2 1/2. [For analysis of municipal budget areas, see Smoke, 1983, and MMA, 1982.] However, in dollar terms, public education consumes the largest portion of local budgets and thus, not surprisingly, it absorbed the largest reductions under 2 1/2 in both dollars and personnel. As a result, school cutbacks have triggered the most contentious debate among public officials and political groups.

The evaluation of the state response to 2 1/2 not only examines the degree to which state aid has been equitably and efficiently distributed, but the degree to which the state can enhance equity, particularly in education, under the existing scheme of state and local finance and governance. [The state's experience of trying to enhance educational equity through reform of Chapter 70 in 1978 is particularly instructive in this regard, as will be documented below.] The latter consideration raises questions about factors that affect local budget decisions--in particular, the degree to which educational spending is affected by municipal fiscal pressures, citizen access to decision makers, and teacher organization activity. These issues loom as more significant given the removal of fiscal autonomy for local school committees.

The results of this study are sobering. First, the effect of 2 1/2 has been anything but equitable. Revenue losses have been most pronounced in the fiscally strapped cities (that also have high service needs). Educational cutbacks, particularly in instruction, have been largest in communities with a smaller percentage of high school graduates attending four-year colleges and universities (and a high proportion of low-income families). In all likelihood, the educational opportunities of disadvantaged children have been di-

minished. The state has provided upwards of $400 million in new state aid designed, at least in FY1983, to remedy inequities under 2 1/2. Yet the net losses have still been greatest in the cities and low property wealth communities, and Massachusetts' already inequitable school finance system has, if anything, worsened slightly.

If the state is to enhance equity and to heed the voters' demand for greater accountability and efficiency in government, state policy makers will have to make some tough choices. The concluding section of the report reviews the tradeoffs between the four policy objectives of equity, efficiency, accountability, and local autonomy in light of state experience in the recent past and in light of currently discussed options.

PROPOSITION 2 1/2: THE VOTERS SPEAK

In evaluating the "message" of 2 1/2, it is important to bear in mind the fact that the voters were actually sending a variety of messages to their public officials in that one vote. Or, more precisely, different groups of voters were sending different messages. The message of the prime movers of 2 1/2, Citizens for Limited Taxation, was clear: cut taxes and reduce government spending. However, systematic evidence from a number of sources suggests that voters were particularly concerned about the inefficiency (rather than the level) of government spending and service provision, the lack of accountability for government spending decisions, and the inequity built into the heavy reliance on property taxes for local services.

Furthermore, studies of the "taxpayers' revolt" phenomenon nationwide have suggested that voters are also expressing a general disaffection, a sense of powerlessness in influencing their political environment.

This attitude suggests both that significant decisions should be made locally and that citizens generally should have effective input into those decisions.

Analysis of public opinion surveys in the period preceding and following the vote for 2 1/2 provides reliable insight into the general perceptions and attitudes held by voters. Several studies revealed that voters were concerned about "waste, inefficiency, and corruption" in state and local governments (Becker, 1980, Ladd and Wilson, (1981a, 1981b,) and Patterson, 1980, 1981) and the property tax burden in particular (Ladd and Wilson, 1981, Patterson, 1980). However, with the exception of public welfare, there was little support for a reduction in the level of public service delivery.

In fact, the primary distinction between supporters and opponents of 2 1/2 was not the support (or lack thereof) for the value of government efficiency, but the perception of the degree of inefficiency and the effect that passage of 2 1/2 would have (Ladd and Wilson, 1981b). Supporters believed that substantial cuts could be made in local budgets without a significant loss in service delivery. Opponents expected that 2 1/2 would cut significantly into local service delivery, particularly in education. Supporters also believed that 2 1/2 would increase their control over local school committees, reflecting the repeal of fiscal autonomy contained in the referendum.

Perceptions and beliefs are, of course, the stuff of politics. It is also important, however, for policy makers to know if variations in support for 2 1/2 reflected actual local policies. In an earlier study, I analyzed variations in the local vote for 2 1/2 in light of such local characteristics as spending levels, tax rates and burdens, property wealth, and local votes for other statewide referenda and candidates. The findings are instructive and bear out some of the general results of public opinion analysis; however, they accentuate the relationship between support for 2 1/2 and inequities built into Massachusetts' reliance on local property taxes.

When the margin of support for 2 1/2 is broken down by communities classified according to the level of local property wealth, tax rates, municipal and school spending, an interesting pattern can be seen. As illustrated in Table I, support for 2 1/2 was strongest in communities characterized by low property wealth, high tax rates, moderate levels of per capita municipal spending, and low-to-moderate levels of per pupil educational spending. In other words, support was strongest in communities which suffered from tax inequities--i.e. communities that, because of lower property wealth, taxed themselves at high rates in order to attain moderate levels of spending. These communities were most typically urban. Within suburban communities, where support was also high, vote for 2 1/2 was more likely to reflect conservative orientations (such as strong support for President Reagan in the 1980 election. Support was highest overall in suburbs (an average of 62.2%) and cities (59.1%).

Please see Table I on page 7.

Regression analysis revealed that the strongest determinant of support for 2 1/2 was the local tax rate; however, when the one takes into account the degree to which tax rates reflect property values, the size of the tax rate coefficient declined, highlighting the equity concern (Morgan, 1982). Support for President Reagan still accounted for significant portions of the variation in support for 2 1/2.

These findings became more significant once the effects of Proposition 2 1/2 are reviewed. They would seem to indicate that urban voters may have supported 2 1/2 to bring a halt to soaring property taxes in the hope that this might force some accountability in local governments as well as state reforms that enhanced equity. Suburban voters on the other hand may have been supporting less government in a manner that reflected a conservative philosophy,

TABLE I

SUPPORT FOR PROPOSITION 2 1/2 IN DIFFERENT COMMUNITIES

1980 Equalized Property Wealth Per Capita	% Yes on 2 1/2*
Quintiles:	
Poorest	60.0%
Mod.-Poor	61.4%
Moderate	59.8%
Mod.-Wealthy	58.1%
Wealthiest	52.1%

1980 Full Value Tax Rate	% Yes on 2 1/2
Quintiles:	
Lowest	49.5%
Mod.-Low	57.7%
Moderate	59.4%
Mod.-High	62.4%
Highest	62.0%

1980 Per Capita Municipal Spending	% Yes on 2 1/2
Quintiles:	
Lowest	55.2%
Mod.-Low	61.1%
Moderate	59.5%
Mod.-High	61.0%
Highest	55.1%

1980 Per Pupil Educational Spending	% Yes on 2 1/2
Quintiles:	
Lowest	58.2%
Mod.-Low	60.1%
Moderate	60.3%
Mod.-High	57.8%
Highest	54.1%

*Statewide Average: 58.3%

Data Sources: Massachusetts Taxpayers Foundation, Massachusetts Department of Education. Compiled by author.

anticipating accurately that they would not feel the brunt of cutbacks (which would instead be forced on the "wasteful" cities). Whether or not this interpretation is accurate is, of course, somewhat speculative.

A FRAMEWORK FOR EVALUATING 2 1/2 EFFECTS: LOCAL CHARACTERISTICS

This section reviews demographic, economic, and budgetary data for local communities classified as cities, suburbs, rural towns, and high property wealth resorts. In order to facilitate the evaluation of 2 1/2 effects, these same groupings are used throughout this report.

The classification scheme is based primarily on three criteria: location within or outside the Census Bureau's Standard Metropolitan Statistical Areas (SMSA's), the balance between residential and industrial/commercial property, and (in the case of resorts) property wealth. Cities include all the SMSA "central cities" and surrounding communities that are heavily industrial/commercial. [Because of their significance in this report, individual cities are itemized in the Appendix.] Suburbs are all other communities within SMSA's--i.e., those that are largely residential. Rural towns include all communities that lie outside SMSA's except for high property wealth resorts. The latter are a special case--typically on the seacoast (particularly Cape Cod) or the Berkshires, with high per capita property values, substantial property owned by non-residents, and (often) a low-to-moderate income resident population.

Each of the community types tends to have distinct service needs and/or fiscal characteristics that are pertinent to policy makers. Of course, considerable variation exists within each grouping, and thus in later sections attention is given to distinctive sub-groups (for example, high income suburbs).

Given Massachusetts' reliance on property taxes, the factor that must be considered the primary measure of ability to raise local revenue is property

wealth (of all the measures that follow, property wealth was the single most important determinant of both municipal and educational spending levels). As can be seen in Table II, equalized property values for 1980 and 1982 are distributed unevenly among the four community types, with cities operating at a disadvantage and high-wealth resorts blessed with an ample revenue source. These figures are no surprise and, in fact, are taken into account in some state aid distributions.

TABLE II

EQUALIZED PROPERTY VALUATIONS (PER CAPITA), 1980, 1982

	1980	1982
Cities	$ 11,495	$ 16,380
Suburbs	18,619	26,240
Rural Towns	17,668	23,330
High-Wealth Resorts	73,938	111,273
State Average	23,614	33,482

Data Sources: Massachusetts Department of Revenue, Massachusetts Taxpayers Foundation
Compiled by author.

A number of additional traits are, however, pertinent to the revenue raising capacity of localities. These are divided into two groups, one reflecting what might be called "budgetary fiscal distress," the other "citizen fiscal distress," or various measures that reflect the degree to which the local population is burdened by taxes (or dependent on service provision).[2]

Table III illustrates four measures of budgetary fiscal distress. Population density is a local characteristic that is associated with higher service-provision costs and/or demands, while the portion of local budgets allocated for debt payment and/or pension payment reflects degrees to which local policy makers cannot manipulate budget appropriations to meet new contract demands or 2 1/2-imposed cutbacks (of course, other areas of local budgets, such as

assessments from county, regional and state governments, are similarly "fixed").

Please see Table III on page 11.

As can be seen in the table, cities have disproportionately high population density, high per capita dollar payments for both debt and pension obligations, and a proportion of local expenditures for debt and pensions that is almost twice the state average. While the need for these extensive obligations, particularly in pension payments, is open to argument (Massachusetts cities are not atypical in these obligations), the fact of these commitments acts as a significant burden on cities' abilities to absorb 2 1/2-induced revenue losses.

Table IV indicates variations in local characteristics loosely termed citizen fiscal distress. Cities and rural towns have per capita income levels that are significantly below the state average, and the gap between "rich" and "poor" is widening, particularly in the case of cities. Cities also have a higher proportion of families below the poverty line, although both rural towns and resorts also have higher-than-average numbers of poor families. Resorts have the largest elderly populations, though cities are also above-average on this measure.

These figures are different indicators of the local population's ability to pay taxes, and on all four measures, urban populations fare poorly. In strict income terms, rural towns also are "disadvantaged," while in resorts the burden of taxes is likely to be felt by sizeable poor and elderly populations.

Actual tax rates are substantially higher in cities than in other communities, although tax rates for schools are only slightly higher than the state average and about on a par with those in suburbs. The degree to which

TABLE III

BUDGETARY FISCAL STRESS

	1980 Population Density*	% of 1981 Expenditures for Debt and Pension Payments
Cities	5,513	13.7%
Suburbs	1,295	7.7
Rural Towns	299	6.0
High-Wealth Resorts	248	6.5
State Average	1,209	7.5

	1981 Per Capita Debt Payments	1981 Per Capita Pension Payments
Cities	$67.15	$55.85
Suburbs	43.41	22.01
Rural Towns	32.37	12.01
High-Wealth Resorts	52.86	15.64
State Average	42.69	20.97

*Population per square mile.

Data Sources: U. S. Census Bureau, Massachusetts Taxpayers Foundation
Compiled by author.

TABLE IV

CITIZEN FISCAL DISTRESS

	1980 Per Capita Income	1970-1980 % Increase in Per Capita Income	1980 % of Families Below Poverty Line	1980 % of Population over 65
Cities	$ 6634	78.3%	11.4%	14.1%
Suburbs	8541	93.7	5.1	10.0
Rural Towns	6742	85.0	8.3	11.2
High-Wealth Resorts	7655	92.9	9.6	18.4
State Average	7594	88.9	7.3	11.7

	1981 Full Value Total Tax Rate	1981 Full Value School Tax Rate	1981 Tax Burden*
Cities	47.78 mills	17.83 mills	7.9%
Suburbs	30.46	17.52	6.6
Rural Towns	26.31	16.11	6.7
High-Wealth Resorts	14.24	7.01	11.4
State Average	28.90	16.05	7.3

*Tax Levy as % of Personal Income
Data Sources: U. S. Census, 1980; Massachusetts Taxpayers Foundation
Compiled by author.

local populations are actually burdened by local taxes is reflected in the proportion of personal income that is captured in the local tax levy. Urban populations are somewhat more burdened in this respect than those in suburbs or rural areas. [The figure for resorts is unreliable since the income figure pertains only to the resident population, while the levy draws substantially on non-resident property.]

Table V reveals patterns in what might be termed local economic and demographic "vitality," reflecting population growth, the age of the housing stock, and the local unemployment rate. A declining population and old housing stock are measures associated with fiscal stress. Massachusetts cities are clearly characterized by declining population, low in-migration, old housing, and higher-than-average population (the latter pattern was duplicated in October, 1982, although with higher levels of unemployment). Rural areas and resorts registered high population gains and high unemployment.

TABLE V

LOCAL DEMOGRAPHIC AND ECONOMIC VITALITY

	1970-80 Population Change (%)	% of Population Lived Elsewhere 1974-79	% of Housing Built Before 1939	% Unemployed October, 1981
Cities	- 4.1%	5.3%	56.2%	6.0%
Suburbs	8.5	7.0	33.6	5.0
Rural Towns	22.6	7.0	43.4	6.1
Resorts	46.1	11.2	34.6	6.8
State Average	16.7	7.3	34.5	5.7

Data Sources: U. S. Census, 1980; Massachusetts Division of Employment Security
Compiled by author.

Finally, local communities varied in their pattern of past spending in the years preceding Proposition 2 1/2. As can be seen in Table VI, both per capita municipal spending and per pupil educational spending were highest in

TABLE VI

LOCAL SPENDING: MUNICIPAL AND EDUCATIONAL, 1981

	1981 Per Capita Municipal Spending (includes Education)	1981 Per Pupil School Spending
Cities	$ 888	$ 2434
Suburbs	837	2415
Rural Towns	701	2232
High-Wealth Resorts	1110	2881
State Average	821	2399

Data Source: Massachusetts Department of Education; Massachusetts Taxpayers Foundation
Compiled by author.

the high property wealth resorts. [This is to be expected given the finding that property wealth was the most significant determinant of local spending.] Municipal and educational spending is slightly higher-than-average in cities (as well as suburbs), however not to a degree that would easily justify a charge of "overspending," particularly in light of high density and service needs. [This is noteworthy since the 2 1/2 sponsors, Citizens for Limited Taxation, used per capita spending levels as evidence of excessive spending--C.L.T., n.d.] In both total and school budgets, rural towns spend significantly less than other community types. Also, of note, both municipal and educational spending has increased most rapidly over the past five years in rural towns and resorts.

In sum, the data bear out the claim that Massachusetts cities, like others in the Northeast and Midwest, are fiscally stressed: caught between high service demands, low revenue-raising ability, and a tax-burdened population. Proposition 2 1/2 promised to relieve some of the tax burden, although as seen below, the result was not an improvement in equity.

THE IMPACT OF PROPOSITION 2 1/2

Analysis of 2 1/2 effects confirms that the brunt of Proposition 2 1/2 was borne most heavily by Massachusetts cities and by lower property wealth communities. As the following tables indicate, this pattern prevails when one looks at revenue losses (or gains) in each of the first three years after passage of Proposition 2 1/2 net revenue changes (after state aid distribution) in 1982 and 1983, municipal and school budget cutbacks, reductions in instructional and administrative school expenditures and in the teacher workforce. Data are reported for community types and property value quintiles, and where relevant other local traits linked with large cutbacks are reported.

Local Revenue Losses/Gains, 1982-1984

As can be seen in Table VI, in each of the three years following the implementation of 2 1/2, cities and communities in the lowest property wealth quintile registered losses in per capita revenue due to the tax levy restrictions under 2 1/2 (FY84 figures are Department of Revenue estimates). In the first year under 2 1/2, total revenue losses were distributed more evenly when excise tax losses are taken into account. Still cities lost significantly higher per capita dollars in 1982. Local revenue losses in FY83 and FY84 (estimated) were concentrated in cities, communities with populations greater than 50,000, and the lowest property wealth and per capita income quintiles.

Please see Table VI on page 16.

Revenue Losses After State Aid

In both 1982 and 1983, the state distributed substantial new aid dollars in an effort to ease the blow of Proposition 2 1/2. In the aggregate, this

TABLE VI

LOCAL REVENUE LOSSES/GAINS: 1982 - 1984

	1982 Property Tax Dollars/Capita	1982 Total Tax Dollars/Capita*
Cities	$ -93.2	$ -114.8
Suburbs	-51.2	- 81.8
Rural Towns	-30.1	- 58.4
High-Wealth Resorts	-18.1	- 50.2
State Average	-43.7	- 73.7
Low Property Wealth	-52.3	- 78.5
Low-Moderate Wealth	-49.2	- 74.8
Moderate Wealth	-50.8	- 79.6
High-Moderate Wealth	-46.7	- 74.8
High Wealth	-21.2	- 58.0

	1983 Property Tax Dollars/Capita	1984 Est. Property Tax Dollars/Capita
Cities	$ -23.7	$ - 9.6
Suburbs	12.0	13.8
Rural Towns	8.4	10.7
High-Wealth Resorts	27.3	20.4
State Average	8.9	11.1
Low Property Wealth	- 6.6	- .5
Low-Moderate Wealth	2.1	9.3
Moderate Wealth	10.7	12.5
High-Moderate Wealth	13.5	14.0
High Wealth	24.0	19.7

*Includes property and excise tax revenue
**Equalized property valuation per capita, 1980, quintiles
Data source: Massachusetts Department of Revenue
Compiled by author.

aid probably helped localities immeasurably. However, the distribution of aid failed to overcome the inequities in revenue losses, as can be seen in Table VII. In 1982, aid was distributed according to the so-called "Lottery Formula" resulting in considerable inequities and local windfalls. [The biggest winners, in per capita dollar terms were rural towns.] In light of these inequities, aid was distributed in 1983 in a manner designed to relieve revenue losses directly.

TABLE VII

NET GAINS/LOSSES IN PER CAPITA DOLLARS*: 1982-1983

	FY1982	FY1983
Cities	-$67.7	$ 6.0
Suburbs	- 48.0	23.8
Rural Towns	- 15.7	16.3
High-Wealth Resorts	- 27.6	82.2
State Average	- 35.6	25.7
Low Property Wealth	-$25.3	6.6
Low-Moderate Wealth	- 33.7	14.3
Moderate Wealth	- 45.5	25.3
High-Moderate Wealth	- 43.1	25.0
High Wealth	- 29.2	57.9

*Local Revenue Losses/Gains Plus New State Aid
Data Source: Massachusetts Department of Revenue
Compiled by author.

Net Winners and Losers, 1982-1983

When communities that registered net losses are compared to those that registered net gains in each of the first two years under 2 1/2, three of the local characteristics examined in the preceding section stand out. Revenue losers in both years have significantly lower per capita property wealth than revenue winners, are substantially more densely populated, and have a higher percentage of families below poverty. In other words, communities that lost

revenue after receiving new aid were those with less local revenue-raising ability, and higher service needs. State aid, in other words, failed to compensate for the inequitable impact of Proposition 2 1/2.

Another comparison can be seen in Table VIII in which individual communities registering the greatest revenue loss in 1983 (before and after aid and 1984 are listed, along with the ratio of their per capita property wealth to the statewide average. The table is notable for the repetition of names listed in the three columns. By and large, the biggest revenue losers in 1983 were still the biggest revenue losers even after receiving state aid (designed to compensate localities for 2 1/2 losses). They were also likely to be the biggest revenue losers in 1984. Furthermore, each "loser" had a local revenue-raising ability that was substantially below the state average (and all but West Boylston were more densely populated than the state average).

TABLE VIII

COMMUNITIES REGISTERING GREATEST PER CAPITA REVENUE LOSSES, 1983-1984

	1983 Before State Aid	(EV Ratio)**	1983 After State Aid	(EV Ratio)**	1984 Before State Aid*	
1.	Boston	$-117.4 (.39)	Quincy	$-87.5	Boston	$-99.8
2.	Cambridge	-107.0 (.57)	Revere	-80.5	Lynn	-70.5
3.	Quincy	-100.6 (.57)	W. Boylston	-43.8 (.69)	Revere	-68.5
4.	Hull	- 98.4 (.55)	Rockland	-42.6 (.45)	Chelsea	-61.7
5.	Lynn	- 82.9 (.39)	Boston	-39.0	Worcester	-56.6
6.	Revere	- 80.5 (.46)	Holyoke	-30.8 (.36)	Somerville	-55.7
7.	Chelsea	- 72.6 (.26)	Worcester	-29.4	Pittsfield	-45.7
8.	Brockton	- 71.0 (.41)	Lynn	-28.9	Brockton	-43.8
9.	Greenfield	- 68.9 (.54)	Somerville	-28.4 (.36)	Quincy	-43.3
10.	Worcester	- 66.5 (.37)	Chelsea	-25.3	Greenfield	- 4.6

*At this writing, the distribution of 1984 state aid is still not known.
**Ratio of local equalized property valuation per capita to state average.
Data Sources: Department of Revenue, Massachusetts Taxpayers' Foundation
Compiled by author.

For example, the city of Chelsea, which has very low property wealth, lost $72.6 per capita in local revenue in 1983 (after losing substantial funds in 1982), still was one of the largest revenue losers in the state after receiving significant amounts of compensatory state aid in 1983, and then registered another $61.7 per capita loss in 1984. Although local expenditure data are not yet available for 1983, examination of local expenditure cutbacks in 1982 illustrate the impact of revenue losses comparable to these.

1982 Expenditure Cutbacks: All Cities and Towns

Table IX illustrates the reductions (or increases) in local spending among the four community-types and the five property wealth quintiles in the first year under 2 1/2. Included are changes in total local expenditures, changes in the non-educational portion of local budgets, and changes in the integrated educational operating costs (from the Department of Education's data in which expenditures for regional schools are integrated into local city and town figures).

Please see Table IX on page 20.

As can be seen in the table, cities made significantly greater reductions in total spending than any of the other community types. Similarly, the middle three property wealth quintiles reduced spending by a greater percentage. In addition, spending cuts were greatest in the low-moderate income quintile and in communities with the lowest and highest population density.

When educational and non-educational portions of the local budget are compared an interesting finding emerges. Cities were likely to make greater-than-average cutbacks in both budget areas. However, suburbs and the higher property wealth quintiles concentrated their cutbacks in non-educational areas, while preserving school budgets. [This tendency was particularly pronounced in the high-income suburbs in greater Boston.] Resort communities

TABLE IX

1982 EXPENDITURE CUTBACKS: MUNICIPAL AND EDUCATIONAL

	% Change in Total Spending 1981-1982	$ Change in Non-Educational Spending 1981-2*	% Change in Educational Spending 1981-2**
Cities	-5.0	-3.7	-2.9
Suburbs	-2.4	-2.8	4.9
Rural Towns	-1.7	- .2	-2.7
High-Wealth Resorts	.5	2.8	-3.5
State Average	-2.1	-1.3	.4
Low Property Wealth	.8	11.1	-2.5
Low-Moderate Wealth	-3.1	2.8	-5.7
Moderate Wealth	-2.3	- 5.8	-6.5
High-Moderate Wealth	-3.8	-12.1	.8
High Property Wealth	-1.7	- 2.5	15.4

*Total Municipal Spending Minus Integrated Operating Cost
**Integrated Operating Costs
Data Sources: Massachusetts Taxpayers Foundation, Massachusetts Department of Education
Compiled by author.

and lower property-wealth quintiles tended to cut more substantially in education, while preserving non-educational expenditures.

In other words, education budgets tended to be the target of cutbacks in lower property wealth communities, resorts and rural towns, and cities, while school budgets were protected in the wealthier suburbs and high property wealth quintiles (which include many of the wealthier suburbs). Given the fact that suburbs, in particular, have high proportions of school-aged children in their population, this suggests that budget decision-makers were more "responsive" to school demands where school constituencies were relatively larger and fiscal pressures weaker. They were less responsive where school constituencies were smaller and substantial fiscal pressures existed.

An additional finding is interesting. Non-educational cutbacks were negatively (though weakly) related to per-pupil spending for education, while educational cutbacks were positively related. What this means is that communities that spend at high per pupil levels tended to make cuts in other municipal services, while those that spend at low per pupil levels tended to make cuts in education. Clearly, this pattern does not serve educational equity. More significantly, it suggests a local dynamic that may work against state efforts to enhance equity--a topic discussed below. [The reader should note that, as expenditure data, these figures include the receipt of state aid.]

Local School Districts: Educational Cutbacks

It is possible to learn more about educational cutbacks by examining budget decisions in communities where all academic schools lie within the local jurisdiction (i.e., including towns that use regional vocational schools, but are not part of academic regional school systems). [This sample includes 176 cities and towns, almost exactly half of the state total. It tends to under-represent small rural communities.]

As indicated in Table X, cities and low-to-moderate property wealth communities reduced school spending more substantially than other community types. This pattern was true for the total school budget, for the instructional portion of the budget, and for personnel reductions in the teaching workforce. Furthermore, cities were substantially more likely to make large (greater than 10%) reductions in the total and instructional budgets. In addition, cutbacks were greater in the lowest income quintiles, and in communities with a high percentage (8%+) of families below poverty. Among suburbs, the size of cutbacks increased as property wealth and income declined; high income suburbs in greater Boston actually registered a slight increase in school spending.

Please see Table X on page 23.

These patterns raise a number of questions relevant to the concern for equity and equal educational opportunity. In particular, it would appear that cutbacks were more substantial, particularly in instruction, in communities characterized by large poverty populations and, often, lower levels of educational spending. These issues will be examined in the next section.

Additional questions regarding the reasons for school cutbacks require closer scrutiny before the fairness of the 2 1/2-impact can be evaluated.

First, a number of local characteristics were significantly associated with teacher workforce reductions: low property wealth, a high tax rate, low per capita income, high fiscal constraint (as measured by the percent of municipal expenditures designated for debt and pension payments), declining pupil enrollments and low access built into local governance (i.e., a city/town council as opposed to a town meeting). Of these local school tax rates and property values were most significantly linked to cutbacks. When revenue losses were taken into account, property wealth explained the largest percent

TABLE X

LOCAL SCHOOL DISTRICT CUTBACKS 1982

	% Change in Total School Expenditures*	% Change in Instructional Expenditures	% Change in Teacher Workforce
Cities	-7.4%	-8.5%	-15.3%
Suburbs	-3.6	-4.3	-11.4
Rural Towns	-3.5	-5.8	-12.0
Resorts	2.1	- .8	- 4.7
State Average	-4.0	-5.1	-11.9
Low Property Wealth	-4.6	-7.1	-13.0
Low-Moderate Wealth	-7.2	-7.0	-14.7
Moderate Wealth	-4.2	-5.5	-12.2
High-Moderate Wealth	-3.5	-3.4	-10.4
High Property Wealth	2.2	0	- 6.1

	% Reducing Total School Expenditures More than 10%	% Reducing Teacher Workforce More than 10%
Cities	34.4%	71.9%
Suburbs	15.2	39.4
Rural Towns	13.9	50.0
Resorts	0	22.2
State Average	17.6	46.6
Low Property Wealth	17.0	59.6
Low-Moderate Wealth	32.4	51.4
Moderate Wealth	17.5	52.5
High-Moderate Wealth	14.3	32.1
High Property Wealth	0	20.8

Data Sources: Massachusetts Department of Education, Massachusetts Association of School Superintendents Survey

Compiled by author.

*From funds appropriated by local school districts from tax revenues and state aid.

(13%) of the variation in cutbacks. School tax rates, per capita income, declining pupil enrollments, fiscal constraint, and governance structure also explained modest percentages in teacher workforce cutbacks.

Regardless of the size of local revenue losses, then, cutbacks in the teaching population tended to reflect three distinct qualities: municipal revenue-raising ability or fiscal constraints, declining pupil enrollments, and the degree of citizen access built into local government. Each was a factor in and of itself--that is, independent of the others. The degree to which revenue-raising ability was linked to cutbacks indicates an inequitable effect. The link with declining pupil enrollments indicates that communities were, to a degree, bringing their workforce (and, therefore, budgets) more in line with pupil populations, (i.e. an efficiency effect). The link with governance structure suggests that cutbacks in a service-delivery area like teaching personnel may have been more difficult in communities where citizens had more direct access to budget decisions (suggesting variations in accountability--discussed later).

Another indication of the fairness of cutback distribution emerges when one compares the percent reduction in teaching personnel to the decline in pupil enrollments for the same time period. As can be seen in Table XI, teacher reductions statewide were 2.9 times as great as the drop-off in pupil enrollments. Cities, rural towns, and the lower two property-wealth quintiles registered higher-than-average ratios, while suburbs, resorts, and higher property-wealth quintiles registered lower-than-average ratios. [For additional comparison, statewide teacher workforce reductions in 1982 were 1.5 times as great as the decline in pupil enrollments from 1970-80. There was little variation among different community types in this ratio.]

TABLE XI

RATIO OF TEACHER CUTBACKS TO PUPIL ENROLLMENT DECLINE, 1981-82

	Ratio
Cities	3.2 to 1
Suburbs	2.4 to 1
Rural Towns	4.3 to 1
Resorts	1.5 to 1
State Average	2.9 to 1
Low Property Wealth	3.3 to 1
Low-Moderate Wealth	4.4 to 1
Moderate Wealth	2.4 to 1
High-Moderate Wealth	2.0 to 1
High Property Wealth	1.7 to 1

Data Source: Massachusetts Association of School Superintendents Survey, Massachusetts Department of Education
Compiled by Author.

These findings indicate that cutbacks in cities were not simply a reflection of declining enrollments (both cities and suburbs registered substantial enrollment decline). Of additional note, there was little difference in the percentage of local schools closed by cities and suburban communities. However, city superintendents were more likely to cite "fiscal pressures" as the reason for school closings, while suburban superintendents were more likely to cite "enrollment decline" (source: Massachusetts Association of School Superintendents survey, analyzed by author).

While overall school budgets and instructional expenditures were declining in most communities in 1982, expenditures for school administration actually increased (raising questions about the efficiency impact of 2 1/2). Table XII compares the change in appropriations for administration to the change in expenditures for administration. The former reflects anticipated revenue losses, while the latter reflects actual losses after state aid was received.

TABLE XII

APPROPRIATIONS AND EXPENDITURES FOR SCHOOL ADMINISTRATION 1981-2

	% Change in Appropriations	% Change in Expenditures
Cities	- 9.4%	1.8%
Suburbs	- 2.3	3.2
Rural Towns	- 1.3	4.8
Resorts	14.8	7.9
State Average	- 3.0	3.5

Data Source: Massachusetts Department of Education
Compiled by author.

While it is possible that expenditure increases in administration reflected the budget "crisis" of 2 1/2, it is doubtful that they produced an increase service delivery efficiency. From this vantage point, the trend in cities is particularly disturbing. First, cities reduced school spending overall (and instructional spending in particular) more than other districts. Second, at the same time, cities increased administrative spending, even though city school systems have been criticized for overspending for administration. Third, the change from appropriations to expenditures suggests that city school systems tended to channel new state aid into administration, rather than rehiring laid-off teachers (or otherwise bolstering instructional programs). [There was little change in the instructional budget reduction from appropriations to expenditures.] These trends suggest a need for a more detailed study of local school systems (as, for example, is being conducted by the Impact 2 1/2 Consortium).

Finally, the comparison of revenue and expenditure changes from several sources in 1982 provides a rough composite picture of the various fiscal forces operating in local school districts (the figures below are for the

176-community sample). As can be seen in Table XIII, all types of communities suffered losses in Federal revenues (for education) in 1982 (on top of 2 1/2 losses). These losses fell especially heavily on cities and high property wealth resorts. Added to the substantial losses in property tax revenue, local receipts (from the excise tax and other assessments and sales), and a smaller-than-average increase in state aid, it is not surprising to find that school spending from all sources decreased most significantly in the cities.

Please see Table XIII on page 28.

Comparing shifts in revenue sources, Federal cutbacks were felt particularly intensely by cities and high property wealth resorts. Property tax losses were felt most intensely by cities and low-wealth communities. Boston and the other central cities were the biggest losers, as were low income communities. Local receipt losses were greatest in rural towns, suburbs, and low property-wealth communities. State aid gains were greatest in suburbs and rural towns and smallest in high-wealth communities.

By piecing together these different revenue sources, one can derive an "explanation" of the overall shift in school spending in each type of locality--subject to two qualifications: (1) percentage figures are misleading since different communities rely on different revenue sources to varying degrees, and (2) the "missing link" is the degree to which budget decision-makers distributed cutbacks between educational and municipal budget areas (see Table IX). The end result is a significant decline in total school spending in Massachusetts cities (and a smaller decline in suburbs--particularly low-to-moderate income suburbs).

TABLE XIII

LOCAL SCHOOL DISTRICT REVENUE SHIFTS, 1981-2 (LOCAL SCHOOLS ONLY)

	% Change in Property Tax Levy	% Change in Local Receipts*	% Change in State Aid**	% Change in Federal Grant Revenue	% Change in School Spending From All Sources
Cities	- 14.1%	- 14.9%	22.0%	- 15.3%	- 4.0%
Suburbs	- 4.8	- 29.1	26.6	- 10.3	- 1.5
Rural Towns	- 4.2	- 41.1	37.7	- 8.8	8.7
High-Wealth Resorts	- 2.6	29.6	20.1	- 27.3	29.5
State Average	- 5.2	- 25.9	29.6	- 11.7	1.7

*Estimated receipts from motor vehicle excise tax, license fees, fines, special assessments, rentals, sales of services, and other local sources.
**Total Cherry Sheet receipts
Data Sources: Massachusetts Taxpayers Foundation, Massachusetts Department of Education
Compiled by author.

EQUAL OPPORTUNITY AND EDUCATIONAL EQUITY

As noted earlier, the state's widely acknowledged responsibility for providing an adequate education for all its citizens is one reason why the educational effects of Proposition 2 1/2 are so important. As a form of "legislation" subject to revision and amendment in the legislature, Proposition 2 1/2 is susceptible to the same constitutional guarantees that apply to other laws.

In keeping with the general focus of this report, this section focuses on the distributive effects of 2 1/2 in education. Specifically, I will examine two types of effects for the first year under 2 1/2 (data for the second year, FY1983, will not be available until spring, 1984). In terms of equal educational opportunity, I will examine FY1982 educational cutbacks in terms of two local population traits: the percent of families below poverty and the percent of high school graduates that go on to attend four year private and public colleges and universities (1980 data). [The latter measures are not necessarily measures of school system quality. However, they do at least reflect variations in educational advantages or disadvantages present in different communities and their populations.] I will also examine equal opportunity effects by focusing on disparities in per pupil spending in FY1982 as compared to previous years.

Second, I will examine two forms of educational equity. Ex ante (or taxpayer) equity refers to the relationship between local tax effort (measured by the tax rate) and per pupil spending. In an equitable school finance system, spending is a function of tax effort (rather than wealth or ability). Ex post (or pupil) equity reflects the standard of fiscal neutrality that has been applied in the Serrano case in California (as well as in other states)--namely that per pupil spending is not a function of local property wealth, but only of the wealth of the state as a whole. Measures of each are examined for FY1982 and previous

years back to FY1978, the year prior to passage of Chapter 70 reform under the "Boverini-Collins" Act.[3]

Effects on Equal Educational Opportunity

The previous section clearly demonstrated that first-year cutbacks in education were most substantial in Massachusetts cities. Earlier analysis established that these same cities have larger proportions of poverty families and elderly, and lower per capita income than cities and towns statewide. In addition, the income gap between cities and other communities widened from 1970 to 1980. Given the educational disadvantages often associated with poverty, one can argue that equal opportunity objectives would require that cities make a greater-than-average effort to enhance the educational opportunities of their pupils. The same argument applies to small rural towns.

However, spending data (Table VI) revealed that cities spend only slightly higher than the state average, while rural towns spending significantly lower. Consequently, it is no surprise, as indicated in Table XIV, that substantially smaller proportions of high school graduates in cities and rural towns go on to attend four-year colleges or universities after graduation. Similar discrepancies occur among communities classified by property wealth and per capita income; namely, low income and low wealth communities send substantially smaller proportions of their high school graduates to four-year institutions of higher learning, whether private or public.

Please see Table XIV on page 31.

Reflecting these patterns, school cutbacks fell most heavily on populations that were poorer and less educationally successful. Reductions in instructional budgets, for example, were heaviest in communities with relatively high proportions of poverty families. Communities with less than five percent poverty

TABLE XIV

PERCENTAGE OF HIGH SCHOOL GRADUATES (1980) ATTENDING FOUR-YEAR COLLEGES AND UNIVERSITIES AMONG DIFFERENT COMMUNITY TYPES

Community Type:	% Attending: Private	Private & Public
Cities	16.0%	32.5%
Suburbs	24.8	46.6
Rural Towns	16.9	35.2
High Wealth Resorts	24.5	41.9
State Average	21.5	41.4

Property Wealth:	% Attending: Private	Private & Public
Low Property Wealth	15.0%	31.8%
Low-Moderate Wealth	17.5	36.5
Moderate Wealth	22.2	42.6
High-Moderate Wealth	27.6	51.9
High Property Wealth	32.7	54.5

Per Capita Income:	% Attending: Private	Private & Public
Low Income	13.6%	32.2%
Low-Moderate Income	15.2	30.3
Moderate Income	17.4	34.5
High-Moderate Income	22.0	43.2
High Income	35.5	61.2

Data Sources: U. S. Census, 1980, Massachusetts Department of Education, Massachusetts Taxpayers Foundation
Compiled by author.

families cut instructional budgets by an average of 2.4% while those with 5-8% below poverty reduced budgets by 5.2% and those with more than eight percent below poverty cut 8.3%.

These effects were not limited to cities and rural towns. In fact, the same cutback pattern existed among each of the community-type classifications, as indicated in Table XV. Among cities, suburbs, and rural towns, the greater the percent of families below poverty, the greater the reductions in teaching personnel and instructional budgets. [Note that most cities fall in the high-poverty group, while most suburbs fall in the low-poverty group.]

TABLE XV

LOCAL POVERTY POPULATIONS AND CUTBACKS IN INSTRUCTIONAL BUDGETS, 1981-82

Poverty Population	Cities % Reduction (N)	Suburbs % Reduction (N)	Rural Towns % Reduction (N)	High-Wealth Resorts % Reduction (N)
Less than 5%	-3.5% (2)	-3.1% (63)	-1.9% (3)	2.6% (2)
5% to 8%	-8.5 (7)	-5.5 (31)	-4.3 (16)	1.2 (4)
More than 8%	-8.9 (23)	-11.4 (5)	-7.6 (17)	-2.5 (3)

Data Sources: U. S. Census, 1980, Massachusetts Association of School Superintendents
Compiled by author.

Similarly, cutbacks were most substantial in communities characterized by low percentages of high school graduates attending four-year colleges and universities. As indicated by Table XVI, school districts sending less than 16% of their high school graduates to private four-year colleges and universities, and less than 35% to either public or private institutions made the largest reductions in their instructional budgets. Those sending the highest percent to four-year institutions made the smallest budget cuts. With the exception of resorts, a similar pattern existed within each community type. Similar patterns also existed in teacher workforce reductions and total budget cuts.

TABLE XVI

COLLEGE/UNIVERSITY ATTENDANCE RATES AND LOCAL INSTRUCTIONAL CUTBACKS, 1981-82

Percent of H. S. Graduates Attending 4-Year Private Institutions	% Reduction	Percent of H. S. Graduates Attending 4-Year Private or Public Institutions	% Reduction
Less than 16%	-7.1%	Less than 35%	-7.8%
16 - 25%	-5.7	35-45%	-5.7
More than 25%	-3.2	More than 45%	-2.7

Data Source: Massachusetts Department of Education
Compiled by author.

The assessment of spending disparities[4] and educational equity focuses both on changes from FY1981 to FY1982 and on five-year trends in these figures. The former provides a picture of 2 1/2 effects, while the latter raises questions about the state's overall role in enhancing both equity and equal opportunity.

As can be seen in Table XVII, both cities and rural towns have been more likely to fall below the state median (mid-point) in per pupil spending in every year since 1978. In FY1982, the percentage of cities spending below median levels increased over FY1981, while the percentage of high property wealth resorts in this group declined.

Over the five-year period, two patterns are discernible. First, the 1978 Chapter 70 reform improved the standing of cities slightly, an improvement that continued through 1981. Proposition 2 1/2, however, reversed this trend. Second, there has been almost no improvement in the relative standing of communities grouped by property wealth since 1978. In other words, despite the Chapter 70 reform in 1978, equal opportunity has not improved at all according to this measure.

TABLE XVII

PERCENT OF SCHOOL DISTRICTS SPENDING AT BELOW-MEDIAN LEVELS 1978-1982

	1978	1979	1980	1981	1982
Cities	66.7	60.6	60.6	51.5	57.6
Suburbs	36.9	39.3	39.3	41.0	41.0
Rural Towns	63.8	62.3	62.3	62.3	63.0
High Wealth Resorts	10.0	10.0	6.7	20.0	13.3
State Average	50.0	50.0	50.0	50.0	50.0
Low Property Wealth	76.5	73.5	75.0	79.4	79.4
Low-Moderate Wealth	67.1	67.1	67.1	65.7	72.9
Moderate Wealth	45.7	51.4	50.0	47.1	51.4
High-Moderate Wealth	45.1	42.3	42.3	39.4	32.4
High Property Wealth	16.7	15.3	16.7	19.4	15.3

Data Source: Massachusetts Department of Education, Massachusetts Taxpayers Foundation
Compiled by author.

Spending disparities among individual school districts can be measured in a variety of ways.[5] Table XVIII illustrates disparities from 1978 to 1982 using three measures that reflect the gap in per pupil spending between districts ranked in different percentiles: the range in per pupil spending from the highest to lowest district, the restricted range from 95th to 5th percentiles (excluding "extreme cases), and the disparity index (reflecting the ratio between spending levels at the 95th and 5th percentiles).

Two more complicated measures are included reflecting the overall variation in per pupil spending among all districts. The coefficient of variation is computed by dividing the standard deviation by the mean--in other words, it measures the degree to which districts deviate from the mean adjusted for each year's average spending level. The relative deviation from the median is the average deviation from the median (midpoint) divided by the median.

TABLE XVIII

PER PUPIL SPENDING DISPARITIES 1978-1982

	1978	1979	1980	1981	1982*
Range: Highest-Lowest	4241	3568	3117	3874	3989
Range: 95th-5th Percentile	1201	1062	1142	1476	1459
Disparity Index	1.81	1.72	1.69	1.79	1.79
Coefficient of Variation**	.24	.19	.17	.19	.20
Relative Deviation from the Median	.157	.134	.129	.141	.146

*First year under Proposition 2 1/2
**Standard deviation divided by the mean
Data Source: Massachusetts Department of Education
Compiled by author.

Each of the latter measures provides useful additional information. For example, the coefficient of variation of .20 in 1982 means that two-thirds of all school districts lie within 20 percent of the average per pupil spending level (while about one-sixth of the school districts lie more than 20 percent above and one-sixth lie more than 20 percent below the mean). The relative deviation from the median equals half the difference between the average spending level for districts above the median and the average for districts below the median, expressed as a percent of the median. As a result, the relative deviation is the percent by which statewide spending would have to increase in order to raise all below-median districts to the average level attained by above-median districts.

The picture which emerges from the table is not overly dramatic. However, some significant patterns can be discerned. First, on all disparity measures, equal opportunity improved in the first year under the Boverini-Collins reform.

Second, after this first-year improvement, spending disparities tended to increase, particularly in 1980-81. Third, in 1982, the first year under Proposition 2 1/2, disparities increased on three measures: the total range in per pupil spending, the coefficient of variation, and the relative deviation from the median. While these changes were slight, the result is that in 1982 equal opportunity, as measured by spending disparities (excepting the restricted range), was at its worst level since passage of the Chapter 70 reform. Revenue shifts in FY1983 and FY1984, and the 2 1/2 percent limitation on local levy increases, suggest that this trend will only worsen in the immediate future.

Similar patterns can be discerned in equity measures. As can be seen in Table XVIX, the correlation between local property wealth and local income and per pupil spending was stronger in FY1982 than it was before passage of Chapter 70 reforms. In other words spending was more strongly linked to property wealth. Furthermore, if one uses more up-to-date property valuation figures, spending is more strongly associated with both property wealth and income than it was for any of the years included in the table. One difference in the table: passage of the Boverini-Collins Act did not improve educational equity as it did equal opportunity.

TABLE XVIX

EDUCATIONAL EQUITY: CORRELATIONS BETWEEN PROPERTY WEALTH, INCOME AND SPENDING

	FY1978	FY1979	FY1980	FY1981	FY1982*
Per Capita Equalized Property Valuation, 1980	.48	.50	.40	.51	.50 (.52)**
Per Capita Income, 1980	.35	.45	.50	.45	.54

*First year under Proposition 2 1/2
**Equalized Valuation Per Capita, 1982
Data Sources: Massachusetts Department of Education, Massachusetts Taxpayers Association, Massachusetts Department of Revenue
Compiled by author.

Table XX compares ex ante and ex post equity measures for the five years, using standardized regression coefficients (beta weights). As can be seen in the table, property wealth has maintained a consistent impact on per pupil spending, and thus the ex post equity standard is not fulfilled. School tax rates had a weak, negative relationship with spending in 1978 and 1981 (in other words, high tax rate communities actually spent less per pupil--a testimony to the significance of property wealth inequities). In other years, including 1982, there was no statistically significant relationship--i.e., school tax rates had no measurable impact on spending levels. Thus the standard of ex ante is also not fulfilled. The Chapter 70 reform in 1978 improved ex ante equity but had little effect on ex post equity. Proposition 2 1/2 resulted in a slight decline in ex post equity and a slight improvement in ex ante equity.

TABLE XX

EX POST AND EX ANTE EDUCATIONAL EQUITY, 1978-1982 (REGRESSION COEFFICIENTS)

	FY1978	FY1979	FY1980	FY1981	FY1982*
Property Wealth 1980	.48	.50	.40	.51	.50(.52)**
School Tax Rate 1980	-.19	-.09	-.08	-.15	.05

*First year under Proposition 2 1/2
**Equalized Property Wealth, 1982
Data Sources: Massachusetts Department of Education, Massachusetts Taxpayers Association
Compiled by author.

By any of the foregoing measures, Massachusetts system of school finance is far from equitable. Contemporary comparisons with other states are difficult, if not impossible to arrive at. However, Massachusetts ranked very low among states nationwide in the equity of its school finance system in the late 1970's,[6]

and thus it seems unlikely that any significant improvement has taken place since 1978. From the perspective of equity, this is disturbing, for the state has significantly increased its contribution to localities--particularly in 1979, when educational equality was a primary objective of new state aid.

As the state confronts new demands for state aid or other means of compensating localities burdened by Proposition 2 1/2, this past failure to enhance equity should be instructive, particularly if state policy makers are concerned about efficient uses of state revenue. The remaining portions of this report focus on this issue, first by examining the Chapter 70 reform in 1978 and its link to per pupil spending, and then by looking at two local factors that may affect decisions regarding the use of state aid: teacher organization activity and local citizen access.

THE STATE'S ABILITY TO ACHIEVE EQUITY

The Impact of the Boverini-Collins Act, 1978

Critics of Chapter 70 funding have raised three questions regarding the state's ability to achieve equity in educational spending. First, the new Chapter 70 (like its predecessor) has never been fully funded, thus cutting substantially into funds designated for needy communities by the new aid distribution formula. Second, the reform included a save-harmless guarantee that no district would receive less than 107% of its 1978 aid level, a guarantee that has remained in place since 1979. Third, due to local decision making, there were no guarantees that the new aid would result in educational equalization. Some have feared, for example, that teacher organizations would capitalize on suddenly available funds for large salary gains.

The first criticism remains true on its face. The absence of full funding limits the state's ability to counteract local property wealth inequities,

especially with the save-harmless provision built into the legislation. The latter two criticisms are examined below; both the save-harmless guarantee and local decision-making autonomy have undermined the state's ability to achieve equity, although not in quite the manner expected.

First, as can be seen in the first two columns of Table XXI, the distribution of new state aid was clearly equalizing (regional districts are not included). That is the actual dollar flow was concentrated in the direction of cities and low property wealth communities. [Low income and rural communities, and those with high poverty populations also benefitted significantly from the reform.] This was true both in per pupil dollars and in percentage increases in Chapter 70 aid. In other words, the degree that the save-harmless clause cut into initial aid disbursements was not a significant hindrance to equalization (the long-range effect of the save-harmless clause is analyzed below).

However, the picture that emerges from columns 3-5 illustrates why equity was not greatly enhanced by the reform. Cities and low property wealth communities received by far the largest allotments of new aid, yet they increased per pupil spending only slightly more than other communities. However, their local contribution (in per pupil dollars) to school spending declined significantly, while that of other community types increased significantly. One reason for this pattern can be discerned in column five; cities (especially Boston and the other central cities) and low property wealth communities cut their local school tax rates significantly. [The tax rate changes are only rough indicators of actual taxation changes, since re-assessment and revaluation practices may be hidden in these figures.]

TABLE XXI

THE EFFECTS OF NEW STATE AID UNDER THE BOVERINI-COLLINS ACT, 1979

	1 Dollar Increase in Per Pupil Aid	2 % Increase in Ch. 70 Aid	3 % Increase in Per Pupil Spending	4 % Change in Locally-Generated Per Pupil Spending	5 Millage Change in Local School Tax Rate
Cities	$180.6	32.3%	11.4%	-4.9%	-3.7 mills
Suburbs	35.1	9.7	10.0	6.0	-1.0
Rural Towns	38.4	14.1	9.6	6.2	-2.9
High Wealth Resorts	9.9	7.0	7.9	5.1	.5
State Average	47.3	13.3	9.7	4.9	-1.8
Low Property Wealth	202.0	38.7	10.1	-5.8	-4.7
Low-Moderate Wealth	42.1	9.7	10.4	7.7	-1.2
Moderate Wealth	27.5	7.1	8.8	5.2	- .6
High-Moderate Wealth	22.4	7.0	9.4	4.9	- .2
High Wealth	30.4	8.9	9.7	5.1	-1.3

Data Source: Massachusetts Department of Education
Compiled by author.

From these data it seems clear that the formula for Chapter 70 aid created by the Boverini-Collins Act is equalizing. Regression analysis indicates that the factors most strongly related to the flow of new dollars in 1979 were: per capita income, property wealth, local tax rate, fiscal constraints, and urbanness. The slightly disequalizing initial effect of the save-harmless clause can be seen in the increases in per pupil spending in high-wealth resorts, suburbs (especially high income suburbs), and the high property-wealth quintile.

However, a more seriously disequalizing characteristic of the save-harmless clause has emerged over the years since the 1978 reform. Table XXII indicates the dollars per pupil each local school district received in FY1982 more than it would have received if aid were distributed solely according to the Chapter 70 formula (without the save-harmless clause). [A similar pattern exists with total aid dollars.] As the table readily reveals, the chief beneficiaries of the save-

harmless clause are suburbs, high-property wealth communities, high income districts, and those with a low proportion of poverty families.

TABLE XXII

SURPLUS STATE AID DUE TO THE SAVE-HARMLESS CLAUSE IN CHAPTER 70, 1982

	Surplus Per Pupil Aid*		Surplus Per Pupil Aid
Cities	$128.7	Low Property Wealth	$ 46.9
Suburbs	329.2	Low-Moderate Wealth	176.2
Rural Towns	140.4	Moderate Wealth	430.0
High-Wealth Resorts	268.9	High-Moderate Wealth	384.4
		High Wealth	312.4
State Average	251.0		
Low Income	$ 48.1	High Poverty (8% +)	$110.3
Low-Moderate Income	78.3	Moderate Poverty (5-8%)	239.9
Moderate Income	224.7	Low Poverty (under 5%)	356.8
High-Moderate Income	369.2		
High Income	391.2		

*Amount actual FY1982 Chapter 70 aid exceeds the amount due the local district under the state aid formula at current funding levels.
Data Sources: Massachusetts Department of Education, U. S. Census, 1980, Massachusetts Taxpayers Foundation
Compiled by author.

With the exception of the moderate property wealth quintile, the aid surplus increases as property wealth and income increase and as the proportion of poverty families decline. Surplus per pupil aid was significantly correlated with property wealth, per capita income, the education level of the local community, local tax rate, urbanness, and fiscal constraint. In other words, the communities that tended to gain the most revenue from the Chapter 70 reform (and to lose the most under 2 1/2) are the most disadvantaged by the save-harmless clause. Chapter 70 aid is therefore clearly inequitable in its effect.

The primary reason for the inequitable aid surplus is that the dollar guarantee does not take into account declining pupil enrollments. As enrollments

decline, the formula-based aid figure also declines. However, actual aid remains constant, thereby creating unanticipated inequities in Chapter 70. While pupil enrollments have declined throughout most of the state (especially in suburbs and cities) suburbs and high-wealth communities have been the chief beneficiaries of aid "surpluses" because of the underfunding of Chapter 70. In effect, aid for cities and low-wealth communities is so substantially underfunded that their declining enrollments still leave them at a formula-based aid level above the save-harmless guarantee. Despite declining enrollments, in other words, several cities and low-wealth communities are still being underfunded.

It is also noteworthy that all types of communities receive more aid on the average than they "deserve" according to the formula (at current funding levels). Only a handful of communities still receive more dollars per pupil by virtue of the Chapter 70 formula than they did in 1978. Thus the state is prevented from achieving equity by the distribution of existing dollars as much as the underfunding of Chapter 70. In total, surplus state aid in FY1982 amounted to $190 million, according to Department of Education figures.

As a result, the state faces distinct policy alternatives in attempting to achieve educational equity. One "pure" alternative is to maximize equity in the most efficient manner (subject to local constraints discussed in the next section). Accordingly, the state would eliminate the save-harmless provision, and distribute Chapter 70 aid according to the formula--in other words, re-distributing the $190 million in surplus aid to needy communities. The chief disadvantages of this approach are its lack of political feasibility (a majority of districts would receive less state aid) and the fact that it overlooks good reasons for some state aid to all local school districts regardless of the equity principle.

The second "pure" alternative is to retain the save-harmless guarantee but increase funding of Chapter 70 to the full 50% level. This option would be expensive but would also greatly enhance equity and reduce the number of communities guaranteed aid by the save-harmless clause. Political opposition might arise to the expense and inefficiency (and a likely tax increase) at the state level, but would be unlikely to arise among representatives of districts losing aid.

It is possible to find a middle-ground between these two options. The save-harmless guarantee could be reduced or phased-down to a smaller level (or indexed to pupil enrollment), while the average state share could be increased to 40% or more. Funds could be generated from both the save-harmless phase-down and from small state tax increases. Losses of revenue could be softened by not eliminating save-harmless entirely. Exact proportions and their distributive effects could, of course, be explored through simulations.

In considering various approaches to equity, policy makers should bear in mind the links between Chapter 70 aid, educational equity, and Proposition 2 1/2. First, by increasing the equalizing power of Chapter 70 (through phase-down of save-harmless and/or full funding), the state would not only be enhancing equity but would be counteracting the more burdensome effects of Proposition 2 1/2. Second, the state would in all likelihood be improving taxpayer equity, and therefore addressing one complaint underlying support for 2 1/2. Third, the manner in which the state pursues equity, and the degree to which it does so, are also relevant to voter sentiments expressed in the 1980 referendum. If the state emphasizes increased funding without phasing down save-harmless, it is enhancing equity at substantial cost (and, therefore, is doing so inefficiently). If the state increases its contribution substantially, it also runs the risk of alienating voters, particularly in the suburbs, who have expressed opposition to

new state taxes (or who would lose state aid if the save-harmless clause were phased-down).

The choices are obviously difficult, made more so by the existence of the Webby v. King case. However, another obstacle to equity also needs to be considered: namely the degree to which local decision-making limits state efforts to achieve equity through increases in (or more equitable distribution of) state aid. This is especially true since Proposition 2 1/2 repealed the "fiscal autonomy" of local school communities.

With the removal of fiscal autonomy, school budgets have become susceptible to new fiscal and political pressures with unforeseen consequences for the state's school finance system. These consequences are perhaps foreshadowed by the relative distribution of cutbacks between educational and non-educational budgets in the first year under 2 1/2. As noted previously (Table IX), suburbs and high-wealth communities tended to "protect" educational budgets at the expense of non-educational budgets, while the reverse tended to be true in low-wealth communities (and, relatively speaking, in cities). One may surmise that relative political support for services (as well as fiscal pressure) plays a role in these reductions. As a result, one could expect school budgets to remain more vulnerable to municipal fiscal and political demands in the low property-wealth and urban communities that are the primary targets of Chapter 70.

Another hint of future trends may be evident in the reactions of local school districts to new state aid generated by the Chapter 70 reform in 1978. As noted above, communities receiving large increments of new aid used much of it to substitute for revenue generated by local property taxes, thus reducing the local tax rate. Interestingly, however, the use of regression analysis reveals that 1979 reductions in the local contribution to school spending were best explained by the total municipal tax rate, rather than the school tax rate

(also by the percent of families below poverty, a general service-demand characteristic; the R^2 for both variables was .25). It is plausible that local decision makers were aware of general taxpayer pressures in these communities, or a lack of local support for substantial increases in school spending.

In addition to municipal fiscal pressures, two factors that may also influence school budget decisions are teacher organization activity and the degree of public accountability built into the local decision-making structure. According to Laing's study (see Impact 2 1/2 Symposium, 1983), many local mayors predicted that teacher organizations would have less influence on school budgets once fiscal autonomy was repealed. Others, especially strong supporters of 2 1/2, have argued that the removal of fiscal autonomy will make school committees more accountable to public priorities.

Both claims reflect assumptions about local decision making. The prediction regarding teacher organizations not only reflects the view that teacher organizations will have to compete in a new manner against other local interests, but, implicitly, that teacher organizations have had a significant impact on local budgets in the past. Similarly, the view of school committee accountability assumes that budgetary independence from municipal authorities can be equated with the absence of public accountability. Or, put somewhat differently, that school spending has been higher than the public wanted it to be because school committees were not accountable to the municipal budget-making process.

In both cases, it is difficult to generate evidence that speaks to these arguments. Initial insights into local budget decisions can be gleaned from the Impact 2 1/2 case studies (see Proposition 2 1/2: Its Impact on Massachusetts, 1983), which provide important in-depth coverage of first-year 2 1/2-effects in selected communities.

Teacher Organization Activity

It is extremely difficult to determine precisely the impact of teacher organization activity on local budgets (or, in fact, on teachers' salaries). For the most part, studies have failed to show that teacher organizations or teacher "militancy" have had a significant inflationary impact on salaries or spending when other factors related to salary or spending level are controlled (see Cresswell, 1980). It seems likely that teacher organization activity grows out of two-sided conflicts over essential items like wages and salaries, benefits, and working conditions. In some cases these conflicts may reflect aggressiveness on the part of teacher organizations or their leaders; in others they may reflect fiscal or political constraints on local spending. For whatever reasons (and there are probably many), conflict exists when school districts opt for mediation or fact-finding, or when negotiations break down completely and a strike is called.

By examining patterns in the cases of mediation or fact-finding, it is possible to gauge more accurately the factors that are associated with local conflict as well as the "effects" of these conflicts. Table XXIII indicates the percentage of local school districts that experienced either mediation or fact-finding in the years from 1978 to 1982 (again, wholly or partially regional districts are excluded). One may examine the degree to which conflictual negotiations took place in communities characterized by fiscal stress, and by high or low per pupil spending levels.

Please see Table XXIII on page 47.

One tendency is fairly clear, mediation or fact-finding tend to occur more in fiscally-stressed communities (e.g., cities and the lower property wealth quintile), and less in high property wealth resorts and the high-wealth quintile. The data that might reveal a link between mediation and spending levels are in-

TABLE XXIII

PERCENTAGE OF LOCAL SCHOOL DISTRICTS INVOLVED IN MEDIATION OR FACT-FINDING, 1978-82

	1978	1979	1980	1981	1982
Cities	27.3%	18.0	33.4	21.2	21.2
Suburbs	21.8	17.6	14.2	16.9	12.2
Rural Towns	11.6	7.7	10.0	11.6	10.0
Resorts	5.3	5.2	0	5.3	13.2
State Average	16.6	12.6	12.9	14.0	12.3
Low Property Wealth	27.9	25.0	23.6	22.1	17.7
Low-Moderate Wealth	13.0	8.6	8.6	18.6	11.4
Moderate Wealth	18.6	14.3	15.7	14.3	12.8
High-Moderate Wealth	12.7	8.4	9.8	5.6	8.5
High Property Wealth	11.1	7.0	7.0	9.7	11.1
Low Per Pupil Spending*	32.4	18.2	10.3	26.3	23.8
Low-Moderate Spending	27.0	0	27.3	24.2	13.2
Moderate Spending	25.0	20.0	22.9	19.4	24.0
High-Moderate Spending	25.7	19.5	7.9	24.3	14.2
High Spending	24.2	6.1	29.0	0	17.2

*These quintiles are re-sorted using spending levels that are concurrent with each year's mediation.

Data Sources: Board of Arbitration and Conciliation, Massachusetts Department of Education, Massachusetts Taxpayers Association

Compiled by author.

conclusive. The tendency for mediation to occur was weakly but negatively related to spending levels in all years but 1980, when it was weakly but positively linked to spending (and more significantly linked to municipal tax rates).

As a result one can discern a link between contract mediation and local fiscal constraints, but not with local spending levels. Table XXIV provides additional insight into conflictual negotiations by testing for a link between mediation in one year (1978) and spending increases the following year. As the table illustrates, there is a tendency for spending to increase at a somewhat higher-than-average rate in communities which experienced fact-finding in 1978. However, these districts also received substantially above-average increments of new state aid under Chapter 70. They were also more likely to reduce the local contribution to school spending (and to reduce local school tax rates). Significantly, the per pupil spending level achieved in 1979 was considerably lower than the state average in these districts. [Interestingly, districts that received large aid increments for 1979 and reduced local school taxes were more likely to experience contract mediation or fact-finding during 1979. However, the latter districts increased spending from 1979-80 only marginally above the state average (5.7% vs. 5.6%) resulting in below-average spending levels.]

Please see Table XXIV on page 49.

As a result there seems to be no demonstrable link between teacher contract mediation or fact-finding in 1978 and subsequent spending increases or levels in the year after Chapter 70 reforms were implemented. Analysis of subsequent years bears out this finding. In no year did mediation and/or fact-finding result in significantly above-average increases or spending levels the following year.

These data, while limited, therefore support a view that teacher contract conflict is more likely to be linked to local fiscal constraints than any teacher

TABLE XXIV

1978 MEDIATION AND FACT-FINDING AND 1979 LOCAL BUDGET SHIFTS

Local Districts With:	% Change in Per Pupil Spending 1978-9	% Change in Ch. 70 State Aid 1978-9
No Mediation or Fact-Finding	6.9%	16.4%
Mediation	7.2	13.7
Fact Finding	8.0	25.6

	% Change in Local Contribution to School Spending 1978-9	1979 Per Pupil Spending
No Mediation or Fact-Finding	2.5%	$1968
Mediation	4.5	1955
Fact Finding	-2.7	1841

Data Sources: Board of Arbitration and Conciliation, Massachusetts Department of Education

Compiled by author.

militancy that might operate independent of these constraints. They also fail to support any contention that contract conflicts resulting in mediation or fact-finding are likely to produce "excessive" spending levels in ensuing years. More data are needed for these questions to be examined conclusively, but at least the evidence presented here challenges presumptions to the contrary.

Local Accountability

It is equally difficult to evaluate claims that the repeal of fiscal autonomy will result in greater school committee accountability. Public opinion surveys would have to be conducted in a variety of communities to ascertain whether or not public satisfaction with school spending has increased in light of local budget decisions. However, it is noteworthy that public opinion polls conducted after first-year budget cutbacks were becoming visible revealed that the public felt cutbacks were excessive, especially in education (Becker, April, 1981; Patterson, October, 1981).

Additionally, democratic theory posits that public accountability is greater when decisions are "closer to the public"--i.e., made by deliberative bodies that have high visibility and high citizen access. The Impact 2 1/2 studies indicate that first-year budget decisions were more centralized in the hands of municipal executives than in past years. Both department heads and town meetings played a smaller role in budget deliberations (Impact 2 1/2, 1983). Arguably public accountability declined.

One intriguing finding linked to budget cutbacks also suggests that local citizens didn't exactly get what they wanted when school budgets were substantially reduced. Deep cutbacks in instructional personnel were more likely to occur in communities governed by city or town councils, rather than town meetings. Of course, governance structures are also related to community type,

population size, and density, and thus this may be a spurious relationship. However, as indicated by Table XXV, a higher percentage of deep cuts were made in city/town councils (and smaller cutbacks in town meetings) even among similar types of community. Although the number of cases in each category were sometimes too small to generate statistically significant differences, the pattern was consistent: governance structures with greater citizen access or representation were less likely to make sizeable reductions in the teacher workforce. One might surmise that the citizen view expressed in public opinion polls--namely satisfaction with the quality of local schools and reluctance to reduce the level of service delivery--was more likely to be heeded where budget decisions were at least nominally shared with accessible, representative bodies like town meetings. In the more centralized city or town council structures, it may have been "easier" to make these cutbacks. Significantly, regression analysis indicates that the fact of having a town meeting structure, rather than city/town council, was a significant deterrent to teacher workforce reductions, even when local fiscal pressures were taken into account.

TABLE XXV

LOCAL GOVERNANCE STRUCTURES AND SCHOOL CUTBACKS*, 1982

	Percent Making Cutbacks Exceeding 14%		
	City/Town Councils	Representative Town Meetings	Open Town Meetings
Cities	52.6%	25.0%	
Suburbs	75.0%	24.0%	31.3%
Rural Towns	60.0%	60.0%	18.8%
High-Wealth Resorts		50.0%	20.0%
High Density Communities	50.0%	26.1%	
Greater than 50,000 population	50.0%	33.3%	
25-50,000 population	72.5%	28.6%	

*Reductions in the teaching work force.
Data Sources: Massachusetts Municipal Association, Massachusetts Department of Education, U. S. Census 1980.
Compiled by author.

As a result, it does not seem likely that the substantial educational cutbacks (especially in instructional staff and funding) were made in response to local citizen input. If anything, the opposite seems to have occurred. Cutbacks were extensive in communities that were fiscally stressed. However, in communities of comparable stress levels, the teaching workforce was targeted for substantial reductions where citizen access was low. One may conclude, therefore, that, at least in public education, Proposition 2 1/2 has thus far had an inequitable impact, with no measurable gain in public accountability.

CONCLUSION

This report has examined a wide range of data relevant to the impact of Proposition 2 1/2, with particular emphasis on public education. This analysis results in a number of conclusions pertinent to state policy makers:

(1) The state of Massachusetts has a policy responsibility for the adequacy and equality of educational opportunities of all its young people.

(2) In 1978, the state's school finance system, Chapter 70, was revised to enhance educational equity. The initial flow of new aid was equitable, and local budgetary decisions resulted in increased taxpayer equity (but not increased educational or pupil equity).

(3) Because of the inclusion of save-harmless guarantees, Chapter 70 funding has become increasingly inequitable. Educational and fiscally needy districts have been ill-served by the retention of the save-harmless clause.

(4) These same districts have suffered disproportionately at the hands of Proposition 2 1/2-mandated revenue losses.

(5) Even when the state has attempted to soften the blow of 2 1/2, the net result has still been inequitable: fiscally-stressed cities and low property wealth communities have continued to suffer the greatest per capita revenue losses. Despite having larger poverty populations and fewer high school graduates attending four-year colleges and universities, these communities made more drastic cutbacks in school budgets--especially in their instructional budgets. They did so primarily because of fiscal pressures, not in response to apparent or potential public input.

(6) Ultimately the burden of 2 1/2, and of inequitably-distributed state aid, is borne by needier pupils and their families. In short, Massachusetts is moving away from, rather than towards, fulfillment of its policy responsibilities in education.

These conclusions, and the findings reviewed in the previous pages would seem to indicate that Massachusetts has not come very far in responding to undercurrents of public dissatisfaction that were successfully tapped by Proposition 2 1/2. First, as amply documented above, fiscal and service-level equity has suffered because of 2 1/2.

Second, efficiency has suffered in at least three respects: (a) state dollars are distributed in a manner that hampers state efforts to achieve equity, resulting in an unnecessarily expensive state-aid package in education. (b) The most fiscally stressed communities made educational cutbacks in excess of 10%; whereas modest reductions may result in improved efficiency, those that exceed 10% are likely to result in service-delivery inefficiencies (see Menchik, et al, 1982). (c) Communities that suffered the greatest revenue losses in 1982, made the largest cutbacks in educational instruction, yet simultaneously used new state aid to increase spending levels in educational administration.

Third, it can be argued that school system accountability has declined in an inequitable manner. Communities where school constituencies were more sizeable experienced fewer fiscal pressures and suffered smaller revenue losses. They were also more likely (than cities) to have town meeting forms of governance. The result: they were significantly less likely to reduce school budgets, particularly in instruction. On the other hand, where school constituencies were smaller there was also less access to budgetary decision-making. These communities also experienced greater fiscal pressures and suffered larger revenue losses. The result: substantial reductions in school spending.

This correspondence between local fiscal inequities and variations in local educational accountability suggests ways in which the state can design policies so as to optimize both values. Traditionally, local decision making is valued because it is viewed as enhancing government accountability. As demonstrated in the foregoing analysis, the system of local decision-making as it is presently constituted, has acted as an obstacle to state efforts to achieve educational equity. However, this is not solely because the present system is based on the principle of accountability, but because local decision-making systems are unequally accountable.

Currently, the simple increase of state aid to the neediest districts may not improve educational equity or equal opportunity at all because these districts, largely urban, have greater non-educational demands on available revenue (for both political and fiscal reasons). Decision-makers are also more shielded from public input. The repeal of fiscal autonomy, made in the name of accountability, only worsens this situation.

State efforts to remedy inequities caused by Proposition 2 1/2 and to enhance educational equity should therefore be guided by simultaneous consideration of equity goals, inefficiencies in the distribution of state aid, and variations in local systems of accountability. Many options are being considered. One possible scenario for optimizing the values of equity, efficiency, accountability, and local decision-making might reflect the following principles or components:

(1) The state has a special responsibility in the area of public education (which is not to deny other special responsibilities). As a result, educational decision-making, and state aid for education should be considered as separate from other municipal areas. Otherwise, educational equity will not be achieved.

(2) In education, the state's share of school spending should be increased substantially to bring Massachusetts in line with the national average. [The 50% share designated by Chapter 70 would seem to be a suitable level.]

(3) Chapter 70 aid should be distributed as closely as possible to the formula standards determined by local property wealth. Save-harmless aid should be substantially phased down or indexed to pupil enrollments. This will enhance the likelihood of educational equity considerably without using state taxpayer dollars inefficiently.

(4) The targeting of state money for education and accountability to local constituencies could be optimized by a reinstatement of fiscal autonomy in conjunction with a more open and representative decision-making process in local school districts/communities. Substantial increments in state aid would soften local concern for school spending levels among non-school constituencies; however, some initial constraints on the use of these increments would seem necessary.

(5) In other areas of municipal budgets, greater emphasis should be placed on constitutional changes that would allow for local option taxation. Sufficient latitude in revenue options should be allowed to compensate for inequities built into local wage or sales taxes. State aid would still be appropriate for certain categorical purposes and to compensate districts for remaining revenue-raising or service-need inequities. However, the level of state aid could be reduced as part of a shift toward local option taxes. Decisions regarding the latter would require more "expert" local decision making but also greater scrutiny by the affected public. Public accountability could conceivably be increased, especially if decision-making structures were more open to citizen input. Structural reforms would seem to be necessary.

These principles are broadly stated and they tend to gloss over a number of highly complex issues. However, as the analysis in this report demonstrates, Proposition 2 1/2 has left Massachusetts in a condition where action needs to be taken to enhance equity, efficiency, and local accountability.

APPENDIX: LIST OF "CITIES"

Auburn
Boston
Brockton
Cambridge
Chelsea
Chicopee
East Hampton
Everett
Fall River
Fitchburg
Haverhill
Holyoke
Lawrence
Lee
Leominster
Lowell
Lynn
Malden
Medford
Millbury
Monson
New Bedford
Peabody
Pittsfield
Quincy
Revere
Salem
Somerville
Springfield
Waltham
Warren
Watertown
Worcester

NOTES

1. Most substantial among these are the Impact 2 1/2 Consortium studies: the bi-weekly newsletter and the two publications cited below. In addition, the author gratefully acknowledges the many groups and individuals who shared study findings or data with him: Becker Research Corporation, Citizens for Limited Taxation, Dr. Helen Ladd, Massachusetts Department of Education, Massachusetts Department of Revenue, Massachusetts Board of Conciliation and Arbitration, Massachusetts Municipal Association, Massachusetts Association of School Superintendents, Massachusetts Association of School Committees, Massachusetts Taxpayers Foundation, and Dr. Franklin Patterson and associates at the Center for Studies in Policy and the Public Interest at the University of Massachusetts in Boston.

2. Conceptually, these two aspects of fiscal distress are drawn from Katharine Bradbury's studies in the New England Economic Review, 1982. Some of my measures of distress are, however, different, because of data availability.

3. The most significant aspects of the Boverini-Collins reform bill include: (a) a changeover in fiscal capacity measures from per pupil property wealth to per capita property wealth, (b) the combination of general, special, vocational, and bi-lingual education funding schemes in one formula, (c) a switch from reimbursement-based to current-year funding, and (d) a target figure of 50% state aid to the average-wealth community --a figure that has never been approached under the reform bill.

4. While the data are spending figures, they reflect spending from revenue derived from state and local sources only. Thus they are comparable to other studies that examine the equity of state school finance schemes. Specifically, these figures represent the "Integrated Operating Costs" of local school districts, in which regional costs are integrated into the

school budgets of cities and towns.

5. See, for example, the studies of Carroll (1979) and Odden, Berne, and Stiefel (1979).

6. According to an Education Commission of the States' study (ECS, 1981), Massachusetts ranked 47th in the nation in educational equity, as measured by the coefficient of variation (1977-78 data).

7. According to the Massachusetts Taxpayers Foundation report, "State Budget Trends, 1974-1983," local aid increased $300 million in 1978-79 (including Chapter 70 reform), and $280 million in 1981-82 (compensation for 2 1/2 losses). In all, local aid increased $900 million from 1978 to 1983 (the latter date representing budget appropriations); in this time, the percent of state expenditures designated for local aid increased from 25% to 30%.

REFERENCES

. The Becker Institute, "A First Look at Massachusetts Voters' Attitudes Toward the Two Tax Reform Referenda to be Voted on In November." Becker Research Corporation, Boston, September, 1980.

. The Becker Institute, "How the Public is Reacting to the Furor over Proposition 2 1/2." Becker Research Corporation, Boston, April, 1981.

. Bradbury, Katharine L., "Fiscal Distress in Large U. S. Cities," New England Economic Review, November/December, 1982, pp. 33-44.

. Carroll, Stephen J., "The Search for Equity in School Finance: Results from Five States," Santa Monica, Rand Corporation, 1979.

. Citizens for Limited Taxation, "Comparison of Municipal Expenditures," CLT, Boston, no date.

. Cresswell, Anthony M. and Michael Murphy, Teachers, Unions, and Collective Bargaining in Public Education (Berkeley, McCutchan, 1980).

° Education Commission of the States (ECS), "Revenues, Expenditures and Tax Burdens: A Comparison of the Fifty States," ECS, Denver, 1981 (Working Paper #35).

° Impact 2 1/2, Proposition 2 1/2: Its Impact on Massachusetts (Cambridge: Oelgeschlager, Gunn, & Hain, 1983a.

° Impact 2 1/2, "Status Report on the Impacts of Proposition 2 1/2," a Symposium held in Gardner Auditorium, Boston, June, 1983b.

° Ladd, Helen F., and Julie Boatright Wilson, "Proposition 2 1/2: Explaining the Vote," Research Report #R81-1, Cambridge: John F. Kennedy School of Government, 1981a.

° Ladd, Helen F., and Julie Boatright Wilson, "Why Voters Support Tax Limitations: The Massachusetts Case," draft of paper, mimeography, Cambridge: John F. Kennedy School of Government, 1981b.

° Laing, Andrew, "Mayoral Perceptions of Changing Political Relationships Under Proposition 2 1/2," in Impact 2 1/2 symposium (1983b), pp.81-6.

° Massachusetts Municipal Association (MMA), "Report on the Impact of Proposition 2 1/2," Boston, Massachusetts Municipal Association, 1982.

° Massachusetts Taxpayers Foundation, "State Budget Trends, 1974-83," Boston: Massachusetts Taxpayers Foundation, 1982.

° Menchik, Mark David, and Judith Fernandez, Michael Caggiano, "How Fiscal Restraint Affects Spending and Services in Cities," Santa Monica: Rand Corporation, January, 1982 (R-2644-FF/RC).

° Morgan, Edward P., "Public Preferences and Policy Realities: Proposition 2 1/2 in Massachusetts," paper presented at the Northeastern Political Science Association meeting, Newark, 1981a(mimeograph)

° Morgan, Edward P., "Public Education and the Taxpayers' Revolt: The Causes and Consequences of Proposition 2 1/2 in Massachusetts," paper presented at the American Education Finance Association annual meeting, Philadelphia, 1981b.

° Morgan, Edward P., "The Effects of Proposition 2 1/2 in Massachusetts," Phi Delta Kappan, December, 1982, pp. 252-258.

° Odden, Alan, Robert Berne, and Leanna Stiefel, "Equity in School Finance," Report No. F79-9, Denver, Education Commission of the States, 1979.

° Patterson, Franklin, Padraig O'Malley, and Raymond Torto, "University of Massachusetts Poll on Proposition 2 1/2," Boston: Center for Studies in Policy and the Public Interest, May, 1980.

° Patterson, Franklin, Padraig O'Malley, and Raymond Torto, "University of Massachusetts Poll on State Taxes and Spending," Boston: Center for Studies in Policy and the Public Interest, October, 1981.

° Smoke, Paul, "Municipal Appropriations Changes during the First Two Years of Proposition 2 1/2," in Impact 2 1/2 Symposium Report, 1983b.

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